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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,337	05/15/2001	Hirofaka Uchiyama	8085	1086

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EXAMINER

CHANNAAVAJALA, LAKSHMI SARADA

ART UNIT	PAPER NUMBER
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1615

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/855,337

Applicant(s)

UCHIYAMA ET AL.

Examiner

Lakshmi S Channavajjala

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Receipt of remarks dated 9-29-04 is acknowledged.

Claims 1-58 are pending.

The following rejection of record has been maintained:

Claim Rejections - 35 USC § 102

Claims 1-16, 18-30, 33-43, 49, 51 and 53-55 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,879,666 to Lucas et al (Lucas) or US 5,874,067 to Lucas et al (Lucas).

Lucas (both US patents) discloses odor-absorbing compositions comprising up to 5% of uncomplexed cyclodextrin (col. 3-4), emulsifiers such as those described in the instant specification (col. 5) and citric acid, which is safe for human skin. In particular, examples I-III of Lucas disclose the specific castor oil surfactant described in the instant specification. With respect to the claimed limitations regarding the % and the level of functionally available cyclodextrin, it is inherent to the composition of Lucas because the uncomplexed cyclodextrin disclosed is in the same amount as claimed. Further, Lucas discloses the same surfactants as claimed and hence the CMC and clog P values claimed are inherent to the surfactants of Lucas. Thus, Lucas anticipates instant claims.

Claim Rejections - 35 USC § 103

Claims 44, 50, 52 and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,879,666 to Lucas et al (Lucas) or US 5,874,067 to Lucas et al (Lucas).

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Neither patents of Lucas teach the use of the composition in a fabric softener, on a fabric or for hard surfaces. The patents also fail to disclose the specific quaternium antimicrobial compounds and the pH of claim 58.

However, both the above patents discuss the utility of cyclodextrin containing compositions for odor absorption on fabrics and in general odor absorption property of cyclodextrin complexes (col. 2). Therefore, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to use cyclodextrin composition for treating animate as well as inanimate surfaces because the efficacy of cyclodextrin to absorb odor would still be maintained irrespective of the surface being treated and also because Lucas suggests using the composition for absorbing odors of a wide range such as foods, urine or other body fluids, that can be associated with skin as well as hard surfaces. Further, Lucas ('666) suggests incorporating antibacterial agents such as triclosan, eugenol, thymol etc., and adjusting the pH in the range of 3.5 to 8 (col. 5, col. 7). Accordingly, including any suitable antimicrobial agent and accordingly, adjusting the pH of the composition without losing the cyclodextrin activity would have been within the scope of a skilled artisan because Lucas ('666) suggests that a pH of 3.5 to 8.0 is suitable in order to reserve most of the cyclodextrin activity.

Claims 17, 31, 32 and 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,879,666 to Lucas et al (Lucas) or US 5,874,067 to Lucas et al (Lucas) in view of Hodul et al (Tenside, Surfactants & Detergents, 1997) or in view of Hodul and Dharmawardana et al (Langmuir, 1993).

Neither of the Lucas patents teaches the claimed method of preparation and aggregate formation of cyclodextrin and surfactants.

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Hodul (abstract) studied the functional properties of inclusion complexes of nonionic surfactants such as polyethoxylated higher fatty alcohols and polyethoxylated phenols with cyclodextrin.

Hodul studied properties such as wetting efficiency, foaming, detergent efficiency etc., and suggests that inclusion complexes of CD with polyethoxylated higher fatty alcohols increases the detergent efficiency to that of polyethoxylated alkyl phenols.

Langmuir teaches a method of determining binding constants for cyclodextrin inclusion complexes for surfactants, which measures the change in surface tension caused by addition of cyclodextrin to aqueous solution of surfactants such as SDS, cetylpyridinium chloride and correlated with surfactant activity. Langmuir teaches surface tension is a function of the amount of CD and that the binding constants are calculated which related to the micelle formation (above or below critical micelle concentration). Langmuir does not teach the claimed surfactants.

However, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention that CD and surfactant interaction play an important role in the detergency or surfactant efficiency of the compositions of Lucas and therefore it would have been obvious for a skilled artisan to choose the amounts of surfactants (compatible or incompatible with CD) such that the desired composition (homogenous versus aggregates) is obtained without sacrificing the odor absorbing property of cyclodextrin.

Response to Arguments

Applicant's arguments filed 9-29-04 have been fully considered but they are not persuasive.

Applicants argue that Lucas references, while disclosing cyclodextrin-containing compositions, also disclose many other ingredients that will complex with uncomplexed cyclodextrin when combined in a deodorant formulation. Applicants argue that the surfactants disclosed by Lucas references are not suitable for the instant invention because they would complex with cyclodextrin, thus not making the cyclodextrins functionally available. Applicants argue that the Dow Corning 365 as well as the other components such as octylphenoxy polyethoxy ethanol and PEG sorbitan monolaurate, present in the examples of Lucas, complex with cyclodextrin. Applicants' arguments have been considered but not found persuasive because instant comprising language does not exclude and allows the presence of other components disclosed and suggested by Lucas references. Applicants have not shown that the presence of the above components in the example of Lucas does in fact affect the ability of the uncomplexed cyclodextrin molecules in binding the unwanted molecules. In this regard, examiner notes that Lucas references also teach the compositions for the same purpose and in fact, applicants agree that the cyclodextrin molecules of Lucas references can be uncomplexed. Furthermore, instant specification defines the claimed uncomplexed cyclodextrins as being able to weakly complex with certainly molecules, thus allowing for some complexation of cyclodextrin.

Applicants argue that Lucas references fail to suggest the instant invention because they disclose body deodorant formulations containing cyclodextrins and they do not desire using formulation components that do not strongly complex with cyclodextrins. Applicants however,

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agree that Lucas teaches compounds some of which complex strongly and some weakly with cyclodextrins. It is also argued that there is no motivation to pick and choose the components that do not complex with cyclodextrins. Applicants also argue that the teachings of Hodul and Dharmawardana do not cure the deficiency of Lucas compositions

Applicants' arguments are not persuasive because the term functionally available cyclodextrin, as explained before, is defined in the specification as including weakly complexed cyclodextrin and the claim language allows for such complexation. Applicants have not shown how the instant composition differs from that of the Lucas composition, in terms of its function in capturing unwanted molecules, in particular, when the composition of Lucas is also directed to the same purpose i.e., controlling odor. As explained in the rejection section, Hodul and Dharmawardana teach the interaction of cyclodextrin molecules with surfactants in terms of the wetting efficiency, foaming action etc., and suggests that the specific complexes of cyclodextrins and surfactants improve the surfactant efficiency. Therefore, it examiner's position that the instant rejections over the teachings of Lucas references and also over Lucas references in view of Hodul and Dharmawardana are proper.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S Channavajjala whose telephone number is 571-272-0591. The examiner can normally be reached on 9.00 AM-6.30 PM, M-F except alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lakshmi S Channavajjala
Examiner
Art Unit 1615
February 15, 2005



Gollamudi S. Kishore, PhD
Primary Examiner
Group 1500

For TK Page